

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: MxQuant- PITC Calibrators (Cal1-Cal7)

UFI: 4SC0-Q0JU-R00M-FFSN

1.2 Relevant identified uses of the substance or mixture and uses advised against

Application of the substance / the mixture

Calibration standards (lyophilized)

For research use only. Not for use in diagnostic procedures.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

biocrates life sciences ag

Eduard-Bodem-Gasse 8

A-6020 Innsbruck

T: +43 512 57 98 23

F: +43 512 57 98 23 329

Further information obtainable from: Email: office@biocrates.com

1.4 Emergency telephone number:

+43 512 57 98 23

Available during office hours:

Mo-Fr: 9 a.m. - 5 p.m.

Call the national emergency number!

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4 H302 Harmful if swallowed.

Additional information: For the wording of the hazard categories, see section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07

Signal word Warning

Hazard-determining components of labelling:

nicotine

guanosine

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Hazard statements

H302 Harmful if swallowed.

Precautionary statements

P280 Wear protective gloves / eye protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

EUH208 Contains 2-aminoadipic acid, purine-2(3H),6(1H)-dione. May produce an allergic reaction.

2.8 % of the mixture consists of component(s) of unknown toxicity.

Contains 4.1 % of components with unknown hazards to the aquatic environment.

2.3 Other hazards

The product contains not fully tested substances and must be used with the required caution.

Results of PBT and vPvB assessment

PBT: No data available.

vPvB: No data available.

Determination of endocrine-disrupting properties

The product does not contain substances with endocrine-disrupting properties ≥ 0.1 % (w/w).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Plasma dry mass with additives.

Dangerous components:



[% (w/w)]

CAS: 300-84-5	Hypotaurin	2.5 - < 10%
	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	
CAS: 529-96-4 EINECS: 208-471-6	Pyridoxamin-5'-phosphat	1 - < 2.5%
	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	
CAS: 54-11-5 EINECS: 200-193-3 Index number: 614-001-00-4	nicotine	< 1%
	☠ Acute Tox. 2, H300; Acute Tox. 2, H310; Acute Tox. 2, H330	
	⚠ Eye Dam. 1, H318	
	⚠ Aquatic Chronic 2, H411	
	⚠ Skin Irrit. 2, H315	
	ATE: LD50 oral: 5 mg/kg LD50 dermal: 70 mg/kg LC50/4 h inhalative: 0.19 mg/l	
CAS: 542-32-5 EINECS: 208-809-2	2-aminoadipic acid	< 0.5%
	⚠ Skin Sens. 1, H317	
CAS: 69-89-6 EINECS: 200-718-6	purine-2(3H),6(1H)-dione	< 0.5%
	⚠ Eye Irrit. 2, H319; Skin Sens. 1, H317	

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CAS: 53-06-5	cortisone	< 0.5%
EINECS: 200-162-4	 Repr. 2, H361	
CAS: 118-00-3	guanosine	< 0.5%
EINECS: 204-227-8	 Acute Tox. 3, H301	

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

In case of discomfort or doubt, seek medical advice.

If unconscious, use a stable lateral position and do not administer anything through mouth.

Immediately remove any clothing soiled by the product.

After inhalation:

Remove person to fresh air and keep comfortable for breathing.

Seek medical treatment in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Seek medical treatment in case of complaints.

After eye contact:

Rinse opened eye for several minutes under running water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Seek medical treatment.

After swallowing:

Do NOT induce vomiting.

Rinse mouth.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

Depending on the condition of the patients, the doctor must assess the symptoms and the overall general condition.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Dust can form explosive mixtures with air.

Explosive mixtures with air are possible when heated.

During heating or in case of fire poisonous gases are produced.

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5.3 Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information

Cool endangered receptacles with water spray.

Do not inhale explosion gases or combustion gases.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Restricted access to the affected area until cleaning work is completed.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Avoid contact with skin and eyes.

Do not breathe dust.

Keep away from ignition sources.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Dispose of the material collected according to regulations.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Keep receptacles tightly sealed.

Avoid contact with skin and eyes.

Prevent formation of dust.

Do not breathe dust.

Use personal protective equipment as required.

Observe protective measures and safety instructions.

Information about fire - and explosion protection:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store in a dry, cool, well-ventilated area.

Store in accordance with local/regional/national/international regulations.

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Information about storage in one common storage facility: Store away from incompatible materials.

Further information about storage conditions:

Keep container tightly sealed.

Protect from heat and direct sunlight.

Recommended storage temperature: room temperature

Storage class: 11

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

CAS: 54-11-5 nicotine

IOELV (EU)	Long-term value: 0.5 mg/m ³ Skin
MAK (Austria)	Short-term value: 2 mg/m ³ , 0.28 ppm Long-term value: 0.5 mg/m ³ , 0.07 ppm
AGW (Germany)	Long-term value: 0.5 mg/m ³ 2(II);EU, 11, 13, H
LEP (Spain)	Long-term value: 0.5 mg/m ³ VLI, vía dérmica, s
VLEP (France)	Long-term value: 0.5 mg/m ³ Risque de pénétration percutanée
WEL (Great Britain)	Short-term value: 1.5 mg/m ³ Long-term value: 0.5 mg/m ³ Sk
TWA (Italy)	Long-term value: 0.5 mg/m ³ Cute
VL (Italy)	Long-term value: 0.5 mg/m ³ Cute
WGW (Netherland)	Long-term value: 0.5 mg/m ³

Regulatory information

IOELV (EU): (EU) 2019/1831

MAK (Austria): GKV 2021, 330. Verordnung, 02.12.2024, Teil 2

AGW (Germany): TRGS 900

LEP (Spain): Límites de exposición profesional para agentes químicos

VLEP (France): ED 1487 26.04.2024

WEL (Great Britain): EH40/2020

TWA (Italy): Valori Limite di Soglia

VL (Italy): D.lgs. n. 135/2024, Allegato A

WGW (Netherland): Grenswaarden gezondheidsschadelijke stoffen

DNELs No data available.

PNECs No data available.

Additional information: The lists valid during the making were used as basis.

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8.2 Exposure controls

Appropriate engineering controls No further data; see section 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Do not eat, drink, smoke or sniff while working.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Ensure good ventilation/exhaustion at the workplace.

Do not breathe dust.

Take off immediately all contaminated clothing and wash it before reuse.

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Hand protection



Protective gloves

EN 374

The glove material has to be impermeable and resistant to the product/ the substance/ the mixture.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection



Tightly sealed goggles

EN 166

Body protection:

Protective work clothing

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Select type and quality of protection clothes depending on concentration and quantity at the workplace.

Environmental exposure controls Do not allow to enter sewers/ surface or ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state	Solid
Colour:	Yellowish
Odour:	Characteristic
Odour threshold:	No information available.
Melting point/freezing point:	No information available.
Boiling point or initial boiling point and boiling range	No information available.
Flammability	combustible
Lower and upper explosion limit	
Lower:	No information available.
Upper:	No information available.
Flash point:	Not applicable.
Decomposition temperature:	No information available.
pH	Not applicable.
Viscosity:	
Kinematic viscosity	Not applicable.
Dynamic:	Not applicable.
Solubility	
water:	No information available.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not applicable.
Density and/or relative density	
Density:	No information available.
Vapour density	No information available.
Particle characteristics	See section 3.

9.2 Other information

Appearance:

Form: Solid

Important information on protection of health and environment, and on safety.

Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Change in condition	
Oxidising properties	No information available.
Evaporation rate	No information available.

Information with regard to physical hazard classes

Explosives void

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Flammable gases	void
Aerosols	void
Oxidising gases	void
Gases under pressure	void
Flammable liquids	void
Flammable solids	void
Self-reactive substances and mixtures	void
Pyrophoric liquids	void
Pyrophoric solids	void
Self-heating substances and mixtures	void
Substances and mixtures, which emit flammable gases in contact with water	void
Oxidising liquids	void
Oxidising solids	void
Organic peroxides	void
Corrosive to metals	void
Desensitised explosives	void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability No further relevant information available.

10.3 Possibility of hazardous reactions No further relevant information available.

10.4 Conditions to avoid

Avoid formation of dust.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials: oxidizing agent

10.6 Hazardous decomposition products: No further relevant information available.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

2.8 % of the mixture consists of component(s) of unknown toxicity.

Acute toxicity

Harmful if swallowed.

LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	585 mg/kg (rat)
Dermal	LD50	8,284 mg/kg (rat)
Inhalative	LC50/4 h	22.5 mg/l

CAS: 529-96-4 Pyridoxamin-5'-phosphat

Oral	LD50	> 7,500 mg/kg (rat)
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Trade name: MxQuant- PITC Calibrators (Cal1-Cal7)

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CAS: 54-11-5 nicotine		
Oral	LD50	5 mg/kg (ATEmix) 50 mg/kg (rat)
Dermal	LD50	70 mg/kg (ATEmix) 50 mg/kg (rat)
Inhalative	LC50/4 h	0.19 mg/l (ATEmix) dust/mist
CAS: 69-89-6 purine-2(3H),6(1H)-dione		
Oral	LD50	> 3,333 mg/kg (mouse)
CAS: 118-00-3 guanosine		
Oral	LD50	100 mg/kg

Primary irritant effect:

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

Other information

To our knowledge, the chemical, physical and toxicological properties of the product have not been comprehensively investigated.

Unknown dangers cannot be ruled out.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

Contains 4.1 % of components with unknown hazards to the aquatic environment.

CAS: 54-11-5 nicotine	
EC50 (48 h)	0.24 mg/l (daphnia) (Daphnia magna)
EC50 (72 h)	37 mg/l (algae) (Desmodesmus subspicatus)
LC50 (96 h)	4 mg/l (fish) (Onchorhynchus mykiss)

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

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Trade name: MxQuant- PITC Calibrators (Cal1-Cal7)

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12.5 Results of PBT and vPvB assessment

PBT: No data available.

vPvB: No data available.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

Additional ecological information:

General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Only dispose of product residues via authorised companies according to local legislation.

European waste catalogue

Notes: The European Waste Catalogue (EWC) classifies waste materials and categorises them according to what they are and how they were produced. This may cause other classifications. The final decision belongs to the last user.

16 03 05*	organic wastes containing hazardous substances
16 05 08*	discarded organic chemicals consisting of or containing hazardous substances
HP6	Acute Toxicity

Uncleaned packaging:

Recommendation:

Dispose of packaging according to regulations on the disposal of packagings.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN, IMDG, IATA

not regulated

14.2 UN proper shipping name

ADR/RID/ADN, IMDG, IATA

not regulated

14.3 Transport hazard class(es)

ADR/RID/ADN, ADN, IMDG, IATA

Class

not regulated

14.4 Packing group

ADR/RID/ADN, IMDG, IATA

not regulated

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

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Trade name: MxQuant- PITC Calibrators (Cal1-Cal7)

UN "Model Regulation":

not regulated

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Regulation (EU) No 649/2012

CAS: 54-11-5 | nicotine

Annex I Part 1

Annex I Part 2

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

National regulations:

Information about limitation of use: Employment restrictions concerning juveniles must be observed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

Relevant phrases

H300 Fatal if swallowed.

H301 Toxic if swallowed.

H310 Fatal in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

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Trade name: MxQuant- PITC Calibrators (Cal1-Cal7)

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H330 Fatal if inhaled.

H335 May cause respiratory irritation.

H361 Suspected of damaging fertility or the unborn child.

H411 Toxic to aquatic life with long lasting effects.

Training hints

Before handling, storage or use for the first time, employees must be informed about the properties of the substance and about measures taken to ensure safety and environmental protection.

Classification according to Regulation (EC) No 1272/2008

Acute toxicity - oral	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
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Department issuing SDS:

UmEnA GmbH

<http://umena.at>

Email: office@umena.at

Date of previous version: 16.05.2025

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2